

Dongfeng Cummins Technical Operations



ENGINE MODEL: 6LTAA8.9-M300

CURVE & DATASHEET: FR92926

REV 00 25Apr2009



Marine Engine Performance Data
Dongfeng Cummins Engine Co., Ltd.
Xiangfan, Hubei Province, China
<http://www.dcec.com.cn>

Basic Engine Model:
6LTAA8.9-M300
FR92926

300 BHP (224kW) @ 1800 RPM
1250 N·m @ 1400 RPM

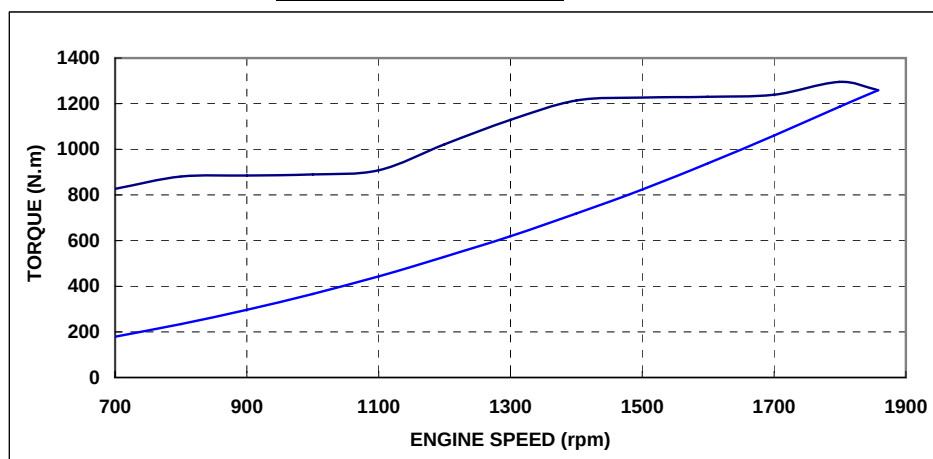
Configuration	CPL Code	Revision
D563014MX03	2724	2009-4-25

Compression Ratio: **16.6:1**
Bore: **114 mm**
Stroke: **145 mm**

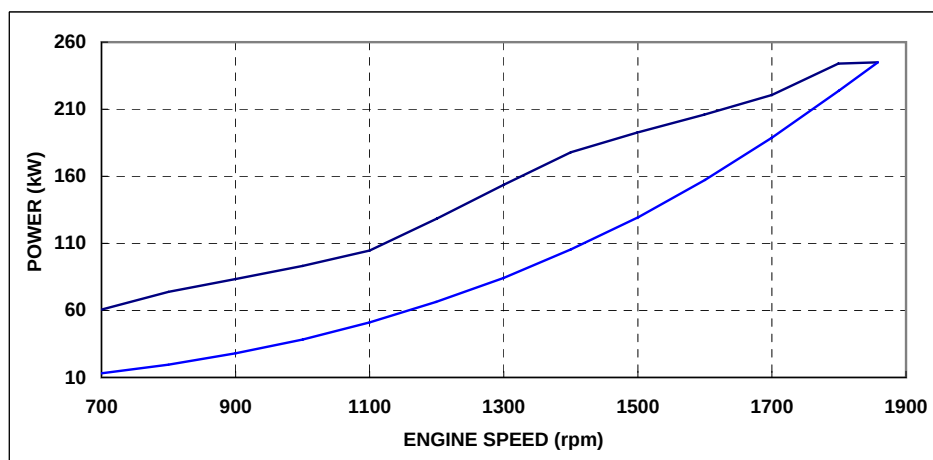
Aspiration: **Turbocharged and Charge Air Cooled**
Displacement: **8.9 L**
No. of Cylinders: **6**
Fuel System: **WEIFU PW2000/RQV_K**

All data is based on the engine operating with fuel system, water pump, and 10 in H₂O (2.488 kPa) inlet air restriction with 5.98 in (152 mm) inner diameter, and with 2.01 in Hg (7 kPa) exhaust restriction with 4.02 in (102 mm) inner diameter; not included are alternator, fan, optional equipment and driven components. Coolant flows and heat rejection data based on coolants as 50% ethylene glycol/50% water. All data is subject to change without notice.

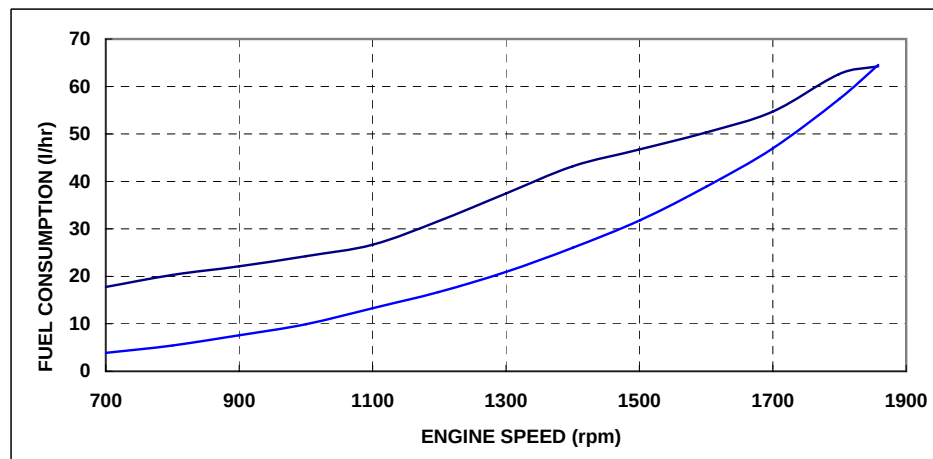
Performance curve



Torque Output	
rpm	N.m
1858	1259
1800	1295
1600	1230
1400	1214
1200	1022
1000	890
900	885
700	827



Power Output	
rpm	kW
1858	245
1800	244
1600	206
1400	178
1200	128
1000	93
900	83
700	61



Fuel Consumption	
rpm	l/hr
1858	64
1800	63
1600	50
1400	43
1200	32
1000	24
900	22
700	18

Curves shown above represent gross engine performance capabilities obtained and corrected in accordance with GB/T18297 conditions of 100kPa (29.61 in. Hg) barometric pressure [80 m (263 ft.) altitude], 25°C (77°F) inlet air temperature, and 1 kPa (0.30 in. Hg) water vapor pressure with No.0# diesel fuel.

GENERAL ENGINE DATA

Engine Model.....	6LTAA8.9-M300
Rating Type	Continuous
Rated Engine Power.....	-kW [bhp] 224kW (300 BHP)
Rated Engine Speed.....	-rpm 1800
Max Power.....	-kW 245
Max Power Speed.....	-rpm 1858
Peak Engine Torque @ 1400 rpm	-N•m 1250
Idle Speed Setting.....	-rpm 630-830
High Idle Speed	-rpm 2100
Compression Ratio	16.6:1
Piston Speed*	-m/sec 8.7
Firing Order.....	1-5-3-6-2-4
Weight (Dry) Engine only - Average.....	-kg 650
Center of Gravity from Front Face of Block.....	-mm 427
Center of Gravity above Crankshaft Centerline.....	-mm 163

ENGINE MOUNTING

Maximum (Static) Bending Moment at Front Support Mounting Surface.....	-N•m 495
Maximum (Static) Bending Moment at Rear Face of Block.....	-N•m 1356
Installation/Operating Angles - Engine Installation Angles	
-In-Line drive: Installation: Static Installed Engine Pitch Angle	
-Engine Front Up From Horizontal	Min. 0°
-Engine Front Up From Horizontal.....	Max. 12°
-Vee Drive: Installation: Static Installed Engine Pitch	
-Engine Front Up From Horizontal	Min. 2°
-Engine Front Up From Horizontal	Max. 12°

EXHAUST SYSTEM*

Maximum Back Pressure.....	-kPa 10.1
Exhaust Gas Flow.....	-litre/sec TBD
Exhaust Gas Temperature Turbine Out.....	-°C 500
Exhaust Pipe Size Normally Acceptable.....	-mm 100
Maximum Static Supported Weight at the Turbocharger Outlet Flange.....	-N•m 14

AIR INTAKE SYSTEM

Maximum Intake Air Restriction with Heavy Duty Air Cleaner	
— Dirty Element.....	-kPa 6
— Clean Element.....	-kPa 4
Minimum Dirt Holding Capacity with Heavy Duty Air Cleaner.....	-g/cfm 53
Maximum Temperature Rise from Ambient to the Inlet of the Turbocharger..	-°C 17
Intake Air Flow*.....	-litre/sec 292
Heat Rejection to Ambient	-kW TBD
Recommended intake piping size (inner diameter).....	-mm 125

CHARGE AIR COOLING SYSTE

Maximum allowable pressure drop across charge air cooler and OEM CAC	
piping(IMPD):.....	-kPa 14
Maximum Intake Manifold Temperature Differential (Ambient to IMT) (IMTD) -°C	35
Intake manifold temperature for Fan-ON.....	-°C 60

FUEL SYSTEM

Maximum Fuel Flow on the Supply Side of the Fuel Pump.....	-litre/hr 300
Maximum fuel supply restriction at fuel pump inlet	
— with clean fuel filter element(s) at maximum fuel flow.....	-kPa 13.6
— with dirty fuel filter element(s) at maximum fuel flow	-kPa 27.1
Maximum fuel drain restriction (total head)	
— before (or without) check valve.....	-kPa 69
Maximum fuel inlet temperature.....	-°C 60

COOLING SYSTEM*

Coolant capacity - engine only.....	-litre	11.1
Minimum water pump inlet pressure with non-deaerating or partially deaerating cooling system.....	-kPa	TBD
Maximum static head of coolant above crankshaft centerline.....	-m	TBD
Standard (modulating) Thermostat Range.....	-°C	82-93
Max. Allowable Block Coolant System Pressure	-kPa	TBD
Minimum pressure cap rating at sea level.....	-kPa	50
Maximum coolant operating temperature at engine outlet (max. top tank temp):.....	-°C	100
Minimum operating block coolant temperature.....	-°C	70
Minimum coolant expansion space (% of system capacity).....	- %	6
Heat Rejection to Coolant.....	-kW	TBD
Maximum recommended external coolant flow restriction in engine circuit:.....	-kPa	34
Maximum deaeration time.....	-min.	25
Minimum drawdown (% total cooling system capacity).....	- %	11
Full ON Fan engine coolant outlet temperature.....	-°C	93.3

LUBRICATION SYSTEM

Normal Operating Oil Pressure Range		
— minimum low idle.....	-kPa	69
—maximum rated speed.....	-kPa	426
Maximum Lube Oil Flow for Engine Accessories.....	-litre/min.	7.6
Maximum Sump Oil Temperature.....	-°C	138
Minimum Required Lube System Capacity - Sump plus Filters.....	-litre	27.6
By-pass Filtration Required.....	-Yes/No	Yes
Angularity of Standard Oil Pan: (Values stated are for intermittent operation only):		
— Front Down.....	- °	30
— Front Up.....	- °	30
— Side to Side.....	- °	30

CRANKING SYSTEM

Minimum Battery Capacity - Cold Soak at 0°F (–18°C) or Above	12V	24V
— Engine Only - Cold Cranking Amperes.....	-CCA	1500 750
— Engine Only - Reserve Capacity.....	-min.	360 180
Maximum Starting Circuit Voltage Drop.....	-Volts	TBD
Minimum Ambient Temperature for Unaided Cold Start.....	-°C(°F)	-12 (10)
Minimum Cranking Speed Required for Unaided Cold Start.....	-rpm	150
Maximum starting circuit resistance.....	-Ohm	0.00075 0.002

EMISSIONS DATA

NO _x (Oxides of Nitrogen).....	-g/kW.h	TBD
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*All Data at Rated Conditions

ALL DATA CERTIFIED WITHIN 5%

TBD = To Be Decided

N/A = Not Applicable

N.A. = Not Available

All data is subject to change without notice, sorry for inform.

Dongfeng Cummins Engine Co., Ltd.